

March 20, 2002

**MODIS sensor Working Group (MsWG) Summary**

**Attendance:** Bill Barnes, Bob Barnes, Stuart Biggar, Vincent Chiang, Wayne Esaias, Bob Evans, Chris Moeller, Junqiang Sun, Gary Toller, Jack Xiong, Eric Vermote, Joe Esposito

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**Scheduled Items****Item 1.** Terra / MODIS currently in Safe Mode (03/19/02)

BB) After the inclination maneuver on March 19 (2002078) the orbital “wobble” was above the on-bit redline limit causing the instrument to go into safe mode.

Recovery timeline

BB) Must wait 1-2 days for SWMIR and LWIR FPA cooldown. Data will be taken before opening the NAD. Expect science in 1-2 days.

**Item 2.** MCST working progress

L1B and LUT related: RVS(t), B26

JX) Band 26 correction, supplied by Chris, is in the process of being added to the L1B code.

Time and AOI dependent RVS upgrade is being implemented in the L1B code and LUTs.

MCST will send new L1B and m1 LUTs to Miami next week.

Jack asked Chris when could he provide Aside and Bside coefficients for the B26 correction.

CM) I'm currently working with the new Aside data (Aside2) and will bring Bside and Aside2 coefficients when visiting MCST next week. It will be interesting to see the effect of Itwk/Vdet changes on the coefficients. Due to coastline ghosting that is apparent in the images, It may also be sensible to build a spatial offset into the correction. We should at least think about adding an option for this.

JX) This implies that the offset table (one constant) initially be set to zero.

CM) We should include this.

BB) How can spatial and optical both depend upon the instrument electronics? Could the method of aggregation cause this?

M) This is possible but unlikely.

JX) Including the offset implies 10 additional parameters (JX added note: Just one number). How the adding of the offset will affect your coefficients should be monitored. Offline discussion suggested by Jack (done).

Trending (RSB)

Completed MCST action items

JX) Sent the polarization data to Miami.

Sent requested SD data to Jim Young.

Sent Thuillier 2002 to Stuart

Terra BRF:

JX) Sent a description on the issue discussed before (MsWG 02/13/2002). A coefficient of the BRF LUT at 900nm is missing one decimal place. (Bob Evans asked how large the effect is at 865 nm.) The effect at 865nm is a little less than

1%. Strongest impact (~ 1%) is at 900nm and lessens as  $\lambda$  moves away (the effect is zero below 600nm and above 1700nm). This was discovered at general STM time frame. The revised BRF reduces the residual rippling seen in m1 trending. Since we use fitted m1 LUTs the effect manifests as an effective offset.

JX) m1 for the short wavelength bands (8, 9, 3, and 10) is still flat. Recently adjusted band 3 LUTs are still good.

#### PFM Processing and FM1

JX) The new L1B 3.0.1 code was not sent to Miami by the DAAC. MCST will provide it directly (Alice).

BB) Except for discussions with Eric, there are no other changes to forward processing?

JX) Eric will deliver information to MCST for the possible B7 correction.

BE) The m1 trend in the new Aside processing is being held constant?

JX) For forward processing of collection 3, the Ocean bands have not been changed, only band 3 has been adjusted due to trended flattening. This implies that since roughly November 2001, the Miami m1 LUT for bands 8, 9, and 10 is progressively getting worse.

WE) Oceans is now off by roughly 6% according to MCST charts.

JX) MCST will capture this in the new L1B code. The main impact will be to bands 8, 9, 3, and 10.

The operational configuration of FM1 will be Bside.

### ***Around the Table***

**Participant:** Bill Barnes – At FM1 main engine cutoff (MECO) a shock pulse was detected that is above the specification by a factor of 4. This is being investigated by TRW.

PFM status: we are cooling down and will turn on the scan mirror.

WE) When will VIS bands be back in Science mode?

BB) In about one to two days. Since Oceans is more sensitive to data changes, inform GSFC/MCST if anything is detected.

**Participant:** Chris Moeller – I have looked at the charts from last week and agree with the conclusion that setting  $a_0 = 0$  for bands 33-36 seems reasonable.

JX) MCST has looked at pre-launch and compared with on-orbit. The numbers are consistent.